drug carries purchase tax, at least for a time, while those who advise the Commissioners of Customs and Excise are making up their minds whether it should be put on the list of exempted preparations. The sums collected in purchase tax on drugs prescribed for N.H.S. patients are probably fairly substantial—£250,000 per annum, according to one estimate—and it will now be greater than ever with the tax going up from 25% to 30%. An incidental effect of the purchase tax on drugs is that the pharmacist's remuneration for dispensing a drug on which purchase tax is paid is greater than it would be if no tax was paid.

So far as hospital building is concerned, the Chancellor of the Exchequer said that he was not reducing capital expenditure on programmes which had already been announced, but "hospital boards will be asked to ensure that only those works are undertaken which are of the most urgent and necessary character." The cost of equipping new hospital departments may be higher, because some furniture and fittings are subject to purchase tax. Most surgical instruments are free of tax, though even here such instruments as dressing scissors must bear tax because they may be used for other than surgical purposes.

AN ANTI-SMOG BOTTLE

Experiments to neutralize acid in fog are being carried out this winter by the Department of Scientific and Industrial Research in collaboration with St. Bartholomew's Hospital. What killed 4,000 people during the London smog in December, 1952, is still not known, and this is hardly surprising, since knowledge of the degree and nature of the pollution is limited to daily mean figures for mass concentration of smoke and sulphur dioxide. Evidence that either of these pollutants was of any clinical significance, except as an indicator of the general level of air pollution, is unconvincing, and it seems more probable that the lethal nature of the air was due to some complex combination of factors. This supposition, however, has not prevented work being done on the effects of the simpler known pollutants.

Sulphuric acid mist is irritant when inhaled, and, though not ordinarily detectable in urban air, it can appear in fog. Even in fairly mild fog as much as 1 mg. per cubic metre has been found,[1 2] and this amount is regarded in the U.S.A. as a "threshold" value for industrial exposure[3] (though P. Drinker[3] refers to many so-called thresholds as "guestimates"). It is unfortunate that we have no measurements of sulphuric acid in the 1952 smog.

R. E. Pattle, when examining the toxic effects of sulphuric acid mists on guinea-pigs,[4] found that the ammonia from their excreta could protect the animals from the effects of the mists. He concluded from his experiments[5] that "if sulphuric acid was a major toxic agent in smog, the smog could be rendered harmless by adding to it sufficient ammonia to neutralize the acid." It is tempting, though rash, to apply these results to the Smithfield Show, in which scrupulously clean cattle suffered and perished whereas pigs and sheep in less hygienic surroundings were unaffected.

With a view to affording protection against acid mists to patients in their homes E. T. Wilkins, of the Fuel Research Station, has devised an elegant alternative to an indwelling pig. By means of an adjustable wick in a bottle of ammonia the air in a room may be kept neutral or alkaline. Laboratory and ward tests have been made at St. Bartholomew's Hospital, and patients with chronic bronchitis and members of the staff are now trying the bottles at home. 1 p.p.m. of ammonia is barely detectable by smell—patients say it makes the room fresh—and is adequate for any acid level likely to occur in smog. (Only 0.08 p.p.m. of ammonia is needed to neutralize 1 mg. per cubic metre of sulphuric acid, and the "threshold" for ammonia is 100 p.p.m.) Any fears about the toxicity of ammonia in these concentrations may be dispelled by the results of a domestic experiment in which it was found that a damp baby ensures more than adequate alkalinity in a room. While some may criticize the principle of adding yet another chemical to the air we breathe, until our fog is clean it would be foolish to neglect trying out so simple a means of neutralizing a potential irritant. But it should be emphasized that sulphuric acid is only one of many pollutants in smog, and its clinical significance is as yet a matter for speculation and further work.

[1] Ellis, B. A., "D.S.I.R. Investigation of Atmospheric Pollution." 17th Report. H.M.S.O., London, 1931.
[2] Waller, R. E., and Lawther, P. J. To be published.
[3] Drinker, P., *British Medical Journal*, 1954, **1**, 1337.
[4] Pattle, R. E. Porton Technical Paper No. 450, 1954.
[5] —— Ministry of Supply Patents Branch Invention Report R.E.P./4 (February, 1954).

SCIENTIFIC EXHIBITION AT THE ANNUAL MEETING

The scientific exhibition has now become a well-established part of the Annual Meetings of the B.M.A., which are the largest gatherings of the whole profession in the United Kingdom and attended also by many overseas medical visitors. Thus there is a large ready-made audience of specialists and general practitioners for the scientific exhibits and a chance for both visitor and exhibitor to learn from each other in a less formal atmosphere than that of the lecture theatre. Next year the Annual Meeting will be held in Brighton (from July 9 to 13). The exhibition to be arranged there is not intended only for the large displays submitted by hospitals, medical schools, and research departments; there will be wall-panels and tables suitable for the small exhibit which is necessarily restricted in scope or modest in size. Thus the exhibition will give an opportunity to those who carry out research on their own, particularly general practitioners, to show how they have brought their ideas to the stage of achievement. All those wishing to submit an exhibit should write to the Secretary of the Association for an application form as soon as possible: the last date for receipt of applications is December 31.